

## CLAIMS

1/ A sender device for sending an encrypted signal, the device comprising a chaos generator producing an encrypted electrical signal and a feedback loop

5 comprising delayline-forming means, non-linear means, and mixer means which receive the loop signal on one input and the signal to be encrypted on another input, wherein the feedback loop includes filter-forming means which limit the spectrum of the encrypted signals to one or

10 more spectrum bands.

2/ A sender device according to claim 1, wherein said filter-forming means disposed in the feedback loop present a transfer function which distributes the chaotic

15 signal statistically over a given spectral profile.

3/ A sender device according to claim 1, wherein the filter-forming means disposed in the feedback loop comprise a bandpass filter.

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4/ A sender device according to claim 3, wherein the passband of said filter covers the spectral band of the signal to be encrypted, having a bandwidth that is slightly greater than that of said spectral band.

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5/ A sender device for emitting an encrypted signal, the device having a plurality of sender modules in cascade, each being constituted by a device according to claim 1.

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6/ A receiver device for receiving an encrypted signal, the device comprising means for receiving said signal and a feedback loop comprising delayline-forming means and non-linear means, wherein in order to receive a signal encrypted by a device according to claim 1, the feedback

35 loop includes filter-forming means whose characteristics are identical to those of the filter-forming means in the feedback loop of the sender device.

7/ A receiver device for receiving a signal encrypted by a sender device according to claim 5, the receiver device comprising a plurality of receiver modules in cascade, 5 each constituted by a device according to claim 6, the number of these modules being the same as the number of modules in the sender device, the filter-forming means in the feedback loops of the reception modules having characteristics that are identical to those of the 10 filter-forming means in the feedback loop of the sender modules.

8/ A sender and/or receiver device for an encrypted signal for transmission by radio over a voice signal carrier, the device including a device according to claim 1.

9/ A transmission system for transmitting encrypted signals, the system comprising a sender device according to claim 1, a complementary receiver device according to claim 6, and a transmission channel between said sender device and said receiver device.

10/ A radio transmission system for transmitting  
25 encrypted signals, the system comprising a sender device  
according to claim 1, a complementary receiver device  
according to claim 6, and a transmission channel between  
said sender device and said receiver device, said  
transmission channel including analog-to-digital  
30 conversion means and digital-to-analog conversion means  
respectively downstream and upstream from the sender  
device and from the receiver device.